Chapter 16
Accounting for Income Taxes

N. Problems

P16-1. ***Suggested solution:***

Taxable income	$250,000
Tax rate	× 30%
Income tax payable; income tax expense	**$75,000**

P16-2. ***Suggested solution:***

Income tax at statutory rate	$ 600,000
Statutory tax rate	÷ 25%
Income before tax	$2,400,000

P16-3. ***Suggested solution:***

Taxable income	$2,400,000
Tax rate	× 25%
Income tax payable	$ 600,000
Installments paid	650,000
Tax due (receivable)	$(50,000)

Dr. Income tax expense	600,000	
Dr. Income tax receivable	50,000	
Cr. Income tax installments		650,000

P16-4. ***Suggested solution:***

Income tax expense under accrual method	$400,000
Less: increase in deferred tax liability	(10,000)
Income taxes paid during year = income tax expense under taxes payable method	$390,000

Note that the change in the tax payable account does not factor into the difference in the income tax expense amounts between the two methods.

P16-5. ***Suggested solution:***

Characteristic	Accounting method
Closest to cash basis accounting	Taxes payable
Focuses on the balance sheet values of deferred tax	Accrual
Similar to direct write-off method for bad debts	Taxes payable
Focuses on the income statement tax expense	Deferral
Records an income tax expense adjustment when tax rates change	Accrual
Analogous to percentage-of-sale method for estimating bad debts	Deferral
Analogous to aging of accounts receivable approach for estimating bad debts	Accrual
Income tax asset and liability balances reflect the prevailing tax rate	Accrual
Income tax expense for the period reflects the prevailing tax rate	Deferral

P16-6. ***Suggested solution:***

a. Computations:

Taxes payable method	2011	2012	2013	Total
Taxable income (given) (A)	nil	$60,000	$80,000	$140,000
Statutory tax rate (given) (B)	30%	30%	30%	30%
Income tax expense (C = A × B)	**$ 0**	**$18,000**	**$24,000**	**$ 42,000**
Income before tax (given) (D)	$10,000	$80,000	$50,000	$140,000
Effective tax rate (E = C / D)	**0%**	**22.5%**	**48%**	**30%**
Accrual method				
Income before tax (given) (F)	$10,000	$80,000	$50,000	$140,000
Statutory tax rate (given) (G)	30%	30%	30%	30%
Income tax expense (H)	**$ 3,000**	**$24,000**	**$15,000**	**$ 42,000**
Income before tax (given) (F)	$10,000	$80,000	$50,000	$140,000
Effective tax rate (H / F)	**30%**	**30%**	**30%**	**30%**

b. The taxes payable method produces an erratic pattern of effective tax rates (0%, 22.5%, and 48%) that significantly deviate from the statutory tax rate of 30%. However, total tax expense over the three years of $42,000 equals 30% of total taxable income. In contrast, the accrual method produces effective tax rates that are consistently equal to the statutory tax rate of 30%.

P16-7. ***Suggested solution:***

	Item	Permanent	Temporary
a.	Golf club dues that are not deductible for tax purposes	✓	
b.	Depreciation of property, plant, and equipment versus the tax method of CCA		✓
c.	Warranty liabilities for which only the actual amount of cash paid is deductible for tax purposes		✓
d.	Percentage of completion income that is taxable only once the contract is complete		✓
e.	Dividends received that are not taxable	✓	

P16-8. ***Suggested solution:***

	Item	Higher	Lower	Neither
a.	Rent revenue collected in advance that is taxable in the year received	✓		
b.	CCA that exceeds depreciation expense for property, plant, and equipment		✓	
c.	Membership dues that are not deductible			✓
d.	Percentage of completion income that is taxable only once the contract is complete		✓	
e.	Dividends received that are not taxable			✓

P16-9. ***Suggested solution:***

	Item	Deductible temporary difference	Taxable temporary difference	Neither
a.	Warranty expense accrued but not deductible until actual costs incurred	✓		
b.	CCA that exceeds depreciation expense for property, plant, and equipment		✓	
c.	Dividends received that are not taxable			✓
d.	A deferred tax asset for rent revenue received in advance and taxed upon receipt	✓		
e.	Equipment that has a carrying value above undepreciated capital cost		✓	

P16-10. ***Suggested solution:***

Income before tax	$300,000
Non-taxable dividend income (permanent difference)	(60,000)
Taxable income and accounting income for computing tax expense	$240,000
Tax rate	20%
Income tax payable and income tax expense	$ 48,000

P16-11. ***Suggested solution:***

Income before tax	$300,000
CCA in excess of depreciation	(60,000)
Taxable income	$240,000
Tax rate	20%
Income tax payable	$ 48,000
Income before tax	$300,000
Tax rate	20%
Income tax expense	$ 60,000

P16-12. ***Suggested solution:***

	Income statement amounts	Taxable income	Accounting income for computing tax expense
Sales revenue	$4,500,000	$4,500,000	$4,500,000
Dividend income (not taxable)	100,000	0	0
Operating expenses other than depreciation	(3,200,000)	(3,200,000)	(3,200,000)
Depreciation or CCA	(800,000)	(1,000,000)	(800,000)
Income before tax	$ 600,000	$ 300,000	$ 500,000
Tax rate		25%	25%
Tax payable or tax expense		$ 75,000	$ 125,000
		Tax payable	Tax expense

P16-13. ***Suggested solution:***

Item/transaction	Amount	Effect on taxable income	Effect on accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Depreciation for accounting	20,000	0	(20,000)	20,000	25%	5,000
CCA	30,000	(30,000)	0	(30,000)	25%	(7,500)
Non-taxable dividends	40,000	0	0	0	25%	0
Provision for warranty	60,000	0	(60,000)	60,000	25%	15,000
Unearned rent revenue	80,000	80,000	0	80,000	25%	20,000
CCA in excess of depreciation	10,000	(10,000)	0	(10,000)	25%	(2,500)

P16-14. ***Suggested solution:***

To prepare journal entries, first prepare a worksheet for permanent and temporary differences:

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before taxes	$550,000	$550,000			
Add back depreciation	45,000		$15,000	30%	$ 4,500
Deduct CCA	(30,000)				
Unearned rent revenue	40,000	—	40,000	30%	12,000
Subtotal	$605,000	$550,000	$55,000		$16,500
Tax rate	30%	30%	30%		
Taxes payable or expense	**$181,500**	$165,000	$16,500		

Journal entries for income taxes:

Dr. Income tax expense—current	181,500	
Cr. Income tax payable		181,500
Dr. Deferred income tax liability *	4,500	
Dr. Deferred income tax asset †	12,000	
Cr. Income tax expense—deferred		16,500

*This debit is to a liability account (not asset) because it results from a reversing temporary difference. We know this to be the case because the only deferred tax balance at the beginning of the year was a liability of $15,000 and it relates to depreciable assets. This implies that prior years' CCA exceeded depreciation and created a deferred tax liability, which is being drawn down in the current year.

†This debit is to an asset account because it results from an originating difference relating to the unearned revenue.

P16-15. ***Suggested solution:***

First compute amounts for taxes payable, income tax expense, and deferred taxes.

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before taxes	$860,000	$860,000			
Add back depreciation	100,000	0	$(102,500)	40%	$(41,000)
Deduct CCA	(202,500)	0			
Unearned rent revenue	5,000	0	5,000	40%	2,000
Add back warranty expense	35,600	0	9,600	40%	3,840
Deduct warranty payments	(26,000)	0			
Non-ded. life insurance	5,200	5,200	0	40%	0
Subtotal	$777,300	$865,200	$ (87,900)	40%	$(35,160)
Tax rate	40%	40%	40%		
Taxes payable or expense	$310,920	$346,080	$ 35,160		

Journal entries for income taxes (DIT = deferred income tax):

Dr. Income tax expense—current	310,920	
Cr. Income tax payable		310,920
Dr. Income tax expense—deferred	41,000	
Cr. DIT liability (PPE)		41,000
Dr. DIT asset (unearned rent revenue)	2,000	
Cr. Income tax expense—deferred		2,000
Dr. DIT asset (warranties)	3,840	
Cr. Income tax expense—deferred		3,840

The above entries may be combined into the following entry:

Dr. Income tax expense—current	310,920	
Cr. Income tax payable		310,920
Dr. Income tax expense—deferred	35,160	
Dr. DIT asset (warranties)	3,840	
Dr. DIT asset (unearned rent revenue)	2,000	
Cr. DIT liability (PPE)		41,000

P16-16. ***Suggested solution:***

First compute amounts for taxes payable, income tax expense, and deferred taxes.

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before taxes	$660,000	$660,000			
Add back depreciation	120,000		$(40,000)	30%	$(12,000)
Deduct CCA	(160,000)				
Dividends received	(50,000)	(50,000)	--	30%	
Non-ded. memberships	20,000	20,000	--	30%	
Add back warranty expense	32,000		2,000	30%	600
Deduct warranty payments	(30,000)				
Subtotal	$592,000	$630,000	$(38,000)	30%	$(11,400)
Tax rate	30%	30%	30%		
Taxes payable or expense	$177,600	$189,000	$11,400		

Journal entries for income taxes (DIT = deferred income tax):

Dr. Income tax expense—current	177,600	
Cr. Income tax payable		177,600
Dr. Income tax expense—deferred	12,000	
Cr. DIT liability (PPE)		12,000
Dr. DIT asset (warranties)	600	
Cr. Income tax expense—deferred		600

The above entries may be combined into the following entry:

Dr. Income tax expense—current	177,600	
Cr. Income tax payable		177,600
Dr. Income tax expense—deferred	11,400	
Dr. DIT asset (warranties)	600	
Cr. DIT liability (PPE)		12,000

P16-17. ***Suggested solution:***

First compute amounts for taxes payable, income tax expense, and deferred taxes. The amount for income before tax must be inferred from the taxable income number by reversing the adjustments to taxable income.

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before tax	$320,000	$320,000			
Add back depreciation	120,000		$40,000	25%	$10,000
Deduct CCA	(80,000)				
Dividends received	(60,000)	(60,000)	--	25%	--
Non-ded. insurance	16,000	16,000	--	25%	--
Subtotal	$316,000	$276,000	$40,000	25%	$10,000
Tax rate	25%	25%	25%		
Taxes payable or expense	$ 79,000	$ 69,000	$10,000		

Journal entries for income taxes (DIT = deferred income tax):

Dr. Income tax expense—current	79,000	
Cr. Income tax payable		79,000
Dr. DIT liability (PPE)	10,000	
Cr. Income tax expense—deferred		10,000

Note that this is a reversing difference, since the information provided indicate a $50,000 cr in deferred tax liability. The entry must go to reduce that DIT liability, rather than being recorded to a DIT asset.

P16-18. ***Suggested solution:***

First compute amounts for taxes payable, income tax expense, and deferred taxes. The amount for income before tax must be inferred from the taxable income number by reversing the adjustments to taxable income.

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before tax	$995,000	$995,000			
Add back depreciation	170,000		$(180,000)	20%	$(36,000)
Deduct CCA	(350,000)				
Add back warranty expense	120,000		30,000	20%	6,000
Deduct warranty payments	(90,000)				
Non-taxable portion of capital gains	(450,000)	(450,000)	--	20%	--
Subtotal	$395,000	$545,000	$(150,000)	20%	$(30,000)
Tax rate	20%	20%	20%		
Taxes payable or expense	$ 79,000	$109,000	$(30,000)		

Journal entries for income taxes (DIT = deferred income tax):

Dr. Income tax expense—current	79,000	
Cr. Income tax payable		79,000
Dr. Income tax expense – deferred	36,000	
Cr. DIT liability (PPE)		36,000
Dr. DIT asset—warranties	6,000	
Cr. Income tax expense—deferred		6,000

The above entries may be combined into the following entry:

Dr. Income tax expense—current	79,000	
Cr. Income tax payable		79,000
Dr. Income tax expense—deferred	30,000	
Dr. DIT asset (warranties)	6,000	
Cr. DIT liability (PPE)		36,000

P16-19. ***Suggested solution:***

First compute amounts for taxes payable, income tax expense, and deferred taxes.

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before taxes	$210,000	$210,000			
Dividend income	(30,000)	(30,000)	$ 0		
Add back depreciation	100,000	0	30,000	35%	$10,500
Deduct CCA	(70,000)	0			
Impairment:					
- portion deductible in future	100,000	0	100,000	35%	35,000
- portion never deductible	100,000	100,000	0	35%	0
Subtotal	$410,000	$280,000	$130,000	35%	45,500
Tax rate	35%	35%	35%		
Taxes payable or expense	$143,500	$ 98,000	45,500		

Journal entries for income taxes (DIT = deferred income tax):

Dr. Income tax expense—current	143,500	
Cr. Income tax payable		143,500
Dr. DIT liability (PPE)	10,500	
Cr. Income tax expense—deferred		10,500
This entry is a debit to a liability account (rather than an asset) because the opening balance was a credit of $76,000		
Dr. DIT asset (land)	35,000	
Cr. Income tax expense—deferred		35,000

The above entries may be combined into the following entry:

Dr. Income tax expense—current	143,500	
Cr. Income tax payable		143,500
Dr. DIT liability (PPE)	10,500	
Dr. DIT asset (land)	35,000	
Cr. Income tax expense—deferred		45,500

P16-20. ***Suggested solution:***

First compute amounts for taxes payable, income tax expense, and deferred taxes.

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before taxes	$840,000	$840,000			
Add back depr. and depl.	450,000	0			
Deduct CCA	(570,000)	0	$(120,000)	30%	$(36,000)
Membership fees	5,000	5,000	0	30%	0
Accounting loss on disposal of equipment*	40,000	0	40,000	30%	$ 12,000
Subtotal	$765,000	$845,000	$ (80,000)	30%	$(24,000)
Tax rate	30%	30%	30%		
Taxes payable or expense	$229,500	$253,500	$ (24,000)		

*The accounting loss is not currently deductible. This loss results in a temporary difference because the amount will be claimed through CCA in future years.

Journal entries for income taxes (DIT = deferred income tax):

Dr. Income tax expense—current	229,500	
Cr. Income tax payable		229,500
Dr. Income tax expense—deferred	24,000	
Cr. DIT liability (PPE) (36,000 cr + 12,000 dr)		24,000

P16-21. ***Suggested solution:***

First compute amounts for taxes payable, income tax expense, and deferred taxes.

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before taxes	$600,000	$600,000			
Add back depr. and depl.	300,000	0			
Deduct CCA	(300,000)	0	$ 0	25%	$ 0
Accounting gain on disposal of equipment*	(240,000)	0	(240,000)	25%	(60,000)
Recapture	200,000	0	200,000	25%	50,000
Capital gain	160,000	0	160,000	25%	40,000
Non-taxable portion of capital gain	(80,000)	(80,000)	0	25%	0
Subtotal	$640,000	$520,000	$120,000	25%	$30,000
Tax rate	25%	25%	25%		
Taxes payable or expense	$160,000	$130,000	$ 30,000		

*The accounting gain is not the amount that is taxable. For tax purposes, the proceeds exceed costs, so there is both recapture and capital gain. Only half of capital gains is taxable.

Journal entries for income taxes (DIT = deferred income tax):

Dr. Income tax expense—current	160,000	
Cr. Income tax payable		160,000
Dr. DIT liability (PPE)	30,000	
Cr. Income tax expense—deferred		30,000

P16-22. ***Suggested solution:***

Dr. Income tax expense—deferred	5,000	
Cr. DIT liability ($100,000 × 5%) or ($40,000 cr × (45%/40% – 1))		5,000

P16-23. ***Suggested solution:***

The tax rate associated with the deferred tax liability was $29,900 / $115,000 = 26%. Thus, the tax rate declined by 2%.

Dr. DIT liability ($115,000 × –2%) or ($29,900 cr × (24%/26% – 1))	2,300	
Cr. Income tax expense—deferred		2,300

P16-24. ***Suggested solution:***

This question is best solved by preparing a schedule that tracks both the amount of temporary differences and the value of the related deferred tax. Let A, B, C and D be the unknown values.

	Deductible (taxable) temporary difference	×Tax rate	= Deferred tax asset (liability)
Balance, beginning of 2013	A	B	$20,000
Effect of tax rate change, if any		2%	C
Taxable temporary difference	D	E	33,000
Balance, end of 2013	$250,000	E	$55,000

First, solve for the tax rate in effect in 2013: E = $55,000 / $250,000 = 22%.
Second, solve for the amount of temporary differences recorded in the year:
D = $33,000 / E = $33,000 / 22% = $150,000.
This amount implies the beginning balance of temporary differences is:
A + $150,000 = $250,000 ➔ A = $100,000.
The amount of the tax adjustment is obtained by solving for C:
$20,000 + C + $33,000 = $55,000 ➔ C = $2,000.
Tax rate in 2012 = B = E – 2% = 22% - 2% = 20%.

	Deductible (taxable) temporary difference	×Tax rate	= Deferred tax asset (liability)
Balance, beginning of 2013	$100,000	20%	$20,000
Effect of tax rate change, if any		+2%	2,000
Taxable temporary difference	150,000	22%	33,000
Balance, end of 2013	$250,000	22%	$55,000

P16-25. ***Suggested solution:***

This question is best solved by preparing a schedule that tracks both the amount of temporary differences and the value of the related deferred tax. Let A, B, C and D be the unknown values.

	Deductible (taxable) temporary difference	×Tax rate	= Deferred tax asset (liability)
Balance, beginning of 2014	A	B	$(55,000)
Effect of tax rate change, if any		30%-B	C
Taxable temporary difference	(80,0000)	30%	(24,000)
Balance, end of 2014	D	30%	$90,000

First solve for C: $55,000 + C + $24,000 = $90,000 ➔ C = $11,000.
Then we have two equations with two unknowns:
AB = $55,000 and
A(30% – B) = $11,000
Simplifying the second equation and substituting:
0.3A – AB = $11,000
0.3A - $55,000 = $11,000
A = $66,000 / 0.3
A = $220,000
Then solve for B: AB = $55,000 ➔ B = 25%
D = $300,000

The completed table is as follows:

	Deductible (taxable) temporary difference	×Tax rate	= Deferred tax asset (liability)
Balance, beginning of 2014	**$(220,000)**	**25%**	$(55,000)
Effect of tax rate change, if any		**5%**	**(11,000)**
Taxable temporary difference	(80,0000)	30%	(24,000)
Balance, end of 2014	**$300,000**	30%	$90,000

Therefore, the beginning and ending balances of temporary differences are $220,000 and $300,000, respectively. The tax rate in effect in 2013 was 25%.

P16-26. ***Suggested solution:***

a. Calculation of taxes payable.

Item/transaction	Taxable income and taxes payable
Income before taxes	$85,000
Add back depreciation	25,000
Deduct CCA	(23,500)
Add unearned revenue	7,000
Subtotal	$93,500
Tax rate	35%
Taxes payable	$32,725

b. Deferred tax balances:

	2013	2014
Deferred tax asset (for unearned revenue)	0	2,450
Deferred tax asset (for property, plant, and equipment)	3,750	4,900

To calculate these balances, convert the balance of cumulative temporary differences using the tax rate for the appropriate year, as follows:

Unearned rent revenue	Deductible (taxable) temporary difference			Deferred tax asset (liability)	
Beginning balance, 2013	0				
Temporary difference, 2013	0				
Temporary difference, 2014	7,000				
Ending balance	7,000		× 35% =	**2,450**	

Property, plant, and equipment	Deductible (taxable) temporary difference			Deferred tax asset (liability)	
Beginning balance, 2013	0			0	
Temporary difference, 2013 (depreciation $25,000 – CCA $12,500)	12,500				
Ending balance, 2013	12,500		× 30% =	**3,750**	
Temporary difference, 2014 (depreciation $25,000 – CCA $23,500)	1,500				
Ending balance	14,000		× 35% =	**4,900**	

P16-27. ***Suggested solution:***

To prepare journal entries, first prepare worksheet for permanent and temporary differences:

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before taxes	$850,000	$850,000			
Add back depreciation	75,000		$(5,000)	32%	$(1,600)
Deduct CCA	(80,000)				
Add back warranty expense	40,000		2,000	32%	640
Deduct warranty payments	(38,000)	0			
Subtotal	$847,000	$850,000	$(3,000)		$ (960)
Tax rate	32%	32%	32%		
Taxes payable or expense	$271,040	$272,000	$ 960		

Journal entries for income taxes excluding consideration for tax rate changes:

Dr. Income tax expense—current	271,040	
Cr. Income tax payable		271,040
Dr. Deferred income tax asset (warranties)	640	
Cr. Income tax expense—deferred		640
Dr. Income tax expense—deferred	1,600	
Cr. Deferred income tax liability (PPE)		1,600

The latter two entries may be combined as follows:

Dr. Income tax expense--deferred	960	
Dr. Deferred income tax asset (warranties)	640	
Cr. Deferred income tax liability (PPE)		1,600

The current-year temporary differences and ending balances imply the following opening balances of cumulative temporary differences:

	PPE	Warranty
Beg. deductible (taxable) temporary difference (implied)	**$(35,000)**	**$ 8,000**
Current-year deductible (taxable) difference (see above)	(5,000)	2,000
Ending deductible (taxable) temporary difference (given)	$(40,000)	$10,000

These opening balances imply a tax rate in the prior year of 30%, calculated as follows:

	PPE	Warranty
Beg. deferred tax asset (liability) (given)	$(10,500)	$2,400
Beg. deductible (taxable) temporary difference (see above)	$(35,000)	$8,000
Ratio of above = tax rate in prior year	30%	30%

The value of the beginning deferred tax asset or liability needs to increase, with the tax rate going from 30% to 32%. The following journal entry makes this adjustment for the tax rate change:

Dr. Income tax expense	540	
Dr. Deferred income tax asset (warranties) ($8,000 × 2%)	160	
Cr. Deferred income tax liability (PPE) ($35,000 × 2%)		700

An alternative way to obtain the amounts for the tax rate change journal entry is to reconcile the ending balances of the temporary differences with the ending balances of the deferred tax balances.

Warranties	Deductible (taxable) temporary difference				Deferred tax asset (liability)	
Opening balance	8,000	(plug)	× =	30%	2,400	(given)
Current-year temporary difference	2,000	(given)	× =	32%	640	
Effect of rate change on opening balance					**160**	(plug)
Ending balance	10,000	(given)	× =	32%	3,200	

Property, plant, and equipment	Deductible (taxable) temporary difference				Deferred tax asset (liability)	
Opening balance	(plug)	35,000	× =	30%	(given)	10,500
Current-year temporary difference	(given)	5,000	× =	32%		1,600
Effect of rate change on opening balance					**plug**	700
Ending balance	(given)	40,000	× =	32%		12,800

P16-28. ***Suggested solution:***

The loss of $220,000 can be carried back to the prior two years: $100,000 to the first year and the remainder of $120,000 to the second year. The amount receivable is determined by the rates prevailing in those prior years, not the rate in the year of loss.

Year	Year 1	Year 2
Taxable income	$100,000	$150,000
Tax paid	$ 20,000	$ 36,000
Tax rate	20%	24%

Loss carried back	To Year 1	To Year 2	Total
Amount	$100,000	$120,000	220,000
Tax rate	20%	24%	—
Income tax receivable	$ 20,000	$ 28,800	**$48,800**

P16-29. ***Suggested solution:***

The loss of $300,000 can be partially carried back to completely eliminate the $160,000 of taxable income in Year 1. The remaining $140,000 needs to be carried forward.

	Carry back to Year 1	Carry forward to future years	Total
Amount	$160,000	$140,000	$300,000
Tax rate	20%	25%	
Income tax receivable	$ 32,000		
Deferred income tax asset		$ 35,000	

P16-30. ***Suggested solution:***

The tax loss of $380,000 can be carried back to the prior three years to eliminate all taxable income in those years, which totals $280,000. The remaining $100,000 must be carried forward. Note that the amount receivable is determined by the rates prevailing in those prior years, not the rate in the year of loss.

Year	2013	2014	2015	Total
Taxable income	$50,000	$200,000	$30,000	$280,000
Tax rate	20%	25%	10%	--
Tax previously paid = tax receivable	$10,000	$50,000	$3,000	$63,000

Journal entries for income taxes (note: DIT = deferred income tax; LCF = loss carryforward):

Loss carryback	Dr. Income tax receivable (on $280,000, see above)	63,000	
	Cr. Income tax expense – current		63,000
Loss carryforward	Dr. DIT asset (LCF) ($100,000 × 25%)	25,000	
	Cr. Income tax expense – deferred		25,000
Temporary differences	Dr. Income tax expense – deferred ($180,000 × 25%)	45,000	
	Cr. Deferred income tax liability		45,000

P16-31. ***Suggested solution:***

The tax loss of $3,500,000 can be carried back to the prior three years to eliminate all taxable income in those years, which totals $2,000,000. The remaining $1,500,000 must be carried forward. Note that the amount receivable is determined by the rates and amounts paid in those prior years.

Year	2013	2014	2015	Total
Taxable income	$500,000	$800,000	$700,000	$2,000,000
Tax previously paid = tax receivable	$150,000	$260,000	$200,000	$610,000

Journal entries for income taxes note: DIT = deferred income tax; LCF = loss carryforward:

Loss carryback	Dr. Income tax receivable	610,000	
	Cr. Income tax expense – current		610,000
Loss carryforward	Dr. DIT asset (LCF) ($1,000,000 × 30%)	300,000	
	Cr. Income tax expense – deferred		300,000
Temporary differences	Dr. Income tax expense – deferred ($500,000 × 25%)	125,000	
	Cr. Deferred income tax liability		125,000
Carryforward valuation	Dr. Income tax expense – deferred (40% × $300,000)	120,000	
	Cr. DIT asset (LCF) valuation allowance		120,000

P16-32. ***Suggested solution:***

a. To record the journal entry, first prepare a worksheet for permanent and temporary differences:

Item/transaction	Taxable income and taxes payable	Accounting income for computing tax expense	Temporary difference = (tax – accounting)	Tax rate	Deferred tax debit (credit)
Income before taxes	$450,000	$450,000			
Add back depreciation	195,000				
Deduct CCA	(97,500)		$ 97,500	30%	$29,250
Add back warranty expense	160,000				
Deduct warranty payments	(75,000)		85,000	30%	25,500
Non-deductible expenses	45,000	45,000	—		—
Subtotal	$677,500	$495,000	182,500		$54,750
Tax rate	30%	30%	30%		
Taxes payable or expense	$203,250	$148,500	$ 54,750		

Journal entries for income taxes:

Dr. Income tax expense	148,500	
Dr. Deferred income tax asset (PPE)*	29,250	
Dr. Deferred income tax asset (warranties)†	25,500	
Cr. Income tax payable		203,250

Dr. Income tax expense—current	203,250	
Cr. Income tax payable		203,250
Dr. Deferred income tax asset (PPE)*	29,250	
Dr. Deferred income tax asset (warranties)†	25,500	
Cr. Income tax expense—deferred		54,750

*This debit is to an asset account because it results from an originating difference. We know this to be the case because this is the first year of operations, and the end-of-year balances of the carrying amounts and UCC differ by exactly $97,500, the current-year temporary difference.
†This debit is to an asset account because it results from an originating difference.

b. Given it is Kinkle's first year of operations, it cannot carry any of the losses back to prior years. The tax savings that would result from applying the losses in future years could be recognized as an asset if it is more likely than not that the amount carried forward will be used within the next 20 years. It could be recommended that management does not claim CCA in a loss year to decrease the chance that those deductions would be wasted if the losses were to expire in future years.

P16-33. ***Suggested solution:***

Note: DIT = deferred income tax; LCF = loss carryforward.
Journal entries for 2013:

Loss carryforward	Dr. DIT asset (LCF) ($12,600,000 × 30%)	3,780,000	
	Cr. Income tax expense – deferred		3,780,000
Carryforward valuation	Dr. Income tax expense – deferred (25% × $3,780,000)	945,000	
	Cr. DIT asset (LCF) valuation allowance		945,000

Journal entries for 2014:

Loss carryforward	Dr. DIT asset (LCF) ($12,600,000 × 2%)	252,000	
	Cr. Income tax expense – deferred		252,000
Carryforward valuation	Dr. Income tax expense – deferred *	63,000	
	Cr. DIT asset (LCF) valuation allowance		63,000

* 25% × $252,000 = $63,000 or $945,000 × (32% / 30% –1) = $63,000

P16-34. ***Suggested solution:***

Note: DIT = deferred income tax; LCF = loss carryforward

2011			
Adj. for change in tax rate (temp. diffs.)	Dr. DIT liability (PPE) (($400,000 × –10%) or $200,000 cr × (40%/50% – 1))	40,000	
	Cr. Income tax expense—deferred		40,000
Current tax payable	Dr. Income tax expense—current	192,000	
	Cr. Income tax payable ($480,000 × 40%)		192,000
Current temp. differences	Dr. Income tax expense—deferred	28,000	
	Cr. DIT liability (PPE)($70,000 × 40%)		28,000

Ending taxable temporary difference = $400,000 +$ 70,000 =$ 470,000
Ending DIT liability balance = $200,000 cr + $28,000 cr +$ 40,000 dr = $188,000 cr

2012			
Adj. for change in tax rate (temp. diffs.)	Dr. Income tax expense—deferred	23,500	
	Cr. DIT liability (PPE) (($470,000 × 5%) or $188,000 cr × (45%/40% – 1))		23,500
Loss carryback	Dr. Income tax receivable (= amount paid in 2011)	192,000	
	Cr. Income tax expense—current		192,000
Loss carryforward	Dr. DIT asset (LCF) (($1,470,000 – $480,000) × 45%)	445,500	
	Cr. Income tax expense—deferred		445,500
Current temp. differences	Dr. Income tax expense—deferred	31,500	
	Cr. DIT liability (PPE) ($70,000 × 45%)		31,500

Ending taxable temporary difference = $470,000 + $70,000 = $540,000
Ending DIT liability balance = $188,000 cr + $23,500 cr +$ 31,500 cr = $243,000 cr
Ending LCF balance = $1,470,000 – $480,000 = $990,000
Ending DIT asset balance = $445,500 dr

2013			
Adj. for change in tax rate (temp. diffs)	Dr. Income tax expense—deferred	27,000	
	Cr. DIT liability (PPE) (($540,000 × 5%) or $243,000 cr × (50%/45% – 1))		27,000
Adjustment for change in tax rate (LCF)	Dr. DIT asset (LCF) (($990,000 × 5%) or ($445,500 dr × (50%/45% – 1))	49,500	
	Cr. Income tax expense—deferred		49,500
Current tax payable	Dr. Income tax expense—current	65,000	
	Cr. Income tax payable ($130,000 × 50%)		65,000

Use of losses carried forward	Dr. Income tax payable	65,000	
	Cr. DIT asset (LCF)		65,000
Current temp. differences	Dr. Income tax expense—deferred	35,000	
	Cr. DIT liability (PPE) ($70,000 × 50%)		35,000

Ending taxable temporary difference = $540,000 +$ 70,000 =$ 610,000
Ending DIT liability balance = $243,000 cr + $27,000 cr +$ 35,000 cr = $305,000 cr
Ending LCF balance = $990,000 – $130,000 = $860,000
Ending DIT asset balance = $445,500 dr + $49,500 dr +$ 65,000 cr = $430,000 dr

2014			
Adj. for change in tax rate (temp. diffs)	Dr. Income tax expense—deferred	30,500	
	Cr. DIT liability (PPE)(($610,000 × 5%) or $305,000 cr × (55%/50% – 1))		30,500
Adjustment for change in tax rate (LCF)	Dr. DIT asset (LCF) (($860,000 × 5%) or ($430,000 dr × (55%/50% – 1))	43,000	
	Cr. Income tax expense—deferred		43,000
Current tax payable	Dr. Income tax expense—current	962,500	
	Cr. Income tax payable ($1,750,000 × 55%)		962,500
Use of losses carried forward	Dr. Income tax payable ($860,000 × 55%)	473,000	
	Cr. DIT asset (LCF)		473,000
Current temp. differences	Dr. Income tax expense—deferred	82,500	
	Cr. DIT liability (PPE) ($150,000 × 55%)		82,500

Ending taxable temporary difference = $610,000 + $150,000 = $760,000
Ending DIT liability balance = $305,000 cr +$ 30,500 cr + $82,500 cr = $418,000 cr
Ending LCF balance = $860,000 – $860,000 = 0
Ending DIT asset balance = $430,000 dr +$ 43,000 dr +$ 473,000 cr = 0

P16-35. ***Suggested solution:***

Note: DIT = deferred income tax; LCF = loss carryforward

2011	A: Probable		B: Not probable	
Current tax payable				
Dr. Income tax expense—current	156,000		156,000	
Cr. Income tax payable ($390,000 × 40%)		156,000		156,000
Current temp. differences				
Dr. DIT liability (PPE) ($140,000 × 40%)	56,000		56,000	
Cr. Income tax expense—deferred		56,000		56,000

Ending taxable temporary difference = $400,000 –$ 140,000 =$ 260,000
Ending DIT liability balance = $160,000 cr +$ 56,000 dr = $104,000 cr

2012	A: Probable		B: Not probable	
Adj. for change in tax rate (temp. diffs.)				
Dr. Income tax expense—deferred	13,000		13,000	
Cr. DIT liability (PPE) (($260,000 × 5%) or $104,000 cr × (45%/40% – 1))		13,000		13,000
Loss carryback				
Dr. Income tax receivable (= amount paid in 2011)	156,000		156,000	
Cr. Income tax expense—current		156,000		156,000
Loss carryforward				
Dr. DIT asset (LCF) ($840,000 – $390,000) × 45%)	202,500		n/a	
Cr. Income tax expense—deferred		202,500		n/a
Current temp. differences				
Dr. DIT liability (PPE) ($60,000 × 45%)	27,000		27,000	
Cr. Income tax expense—deferred		27,000		27,000

Ending taxable temporary difference =$ 260,000 – $60,000 =$ 200,000
Ending DIT liability balance = $104,000 cr + $13,000 cr +$ 27,000 dr = $90,000 cr
Ending LCF balance = $840,000 – $390,000 = $450,000
Ending DIT asset balance = $202,500 dr (Case A only)

2013	Probable		Not probable	
Current tax payable				
Dr. Income tax expense—current	112,500		112,500	
Cr. Income tax payable ($250,000 × 45%)		112,500		112,500
Use of losses carried forward				
Dr. Income tax payable ($250,000 × 45%)	112,500		112,500	
Cr. DIT asset (LCF)		112,500		n/a
Cr. Income tax expense—deferred		n/a		112,500
Current temp. differences				
Dr. DIT liability (PPE) ($50,000 × 45%)	22,500		22,500	
Cr. Income tax expense—deferred		22,500		22,500

Ending taxable temporary difference = $200,000 – $50,000 = $150,000
Ending DIT liability balance = $90,000 cr + $22,500 dr = $67,500 cr
Ending LCF balance = $450,000 –$ 250,000 = $200,000
Ending DIT asset balance = $202,500 dr + $112,500 cr = $90,000 dr (Case A only)

2014	Probable		Not probable	
Current tax payable				
Dr. Income tax expense—current	328,500		328,500	
Cr. Income tax payable ($730,000 × 45%)		328,500		328,500

Use of losses carried forward				
Dr. Income tax payable ($200,000 × 45%)	90,000		90,000	
Cr. DIT asset (LCF)		90,000		n/a
Cr. Income tax expense—deferred		n/a		90,000
Current temp. differences				
Dr. Income tax expense—deferred	31,500		31,500	
Cr. DIT liability (PPE) ($70,000 × 45%)		31,500		31,500

Ending taxable temporary difference = $150,000 +$ 70,000 =$ 220,000
Ending DIT liability balance = $67,500 cr +$ 31,500 cr = $99,000 cr
Ending LCF balance = $200,000 –$ 200,000 = 0
Ending DIT asset balance = $90,000 dr + $90,000 cr = 0. (Case A only)

c. Income statement excerpts

Case A: Probable LCF benefits	2011	2012	2013	2014
Income (loss) before tax	$250,000	$(900,000)	$200,000	$800,000
Income tax expense (recovery)				
Current	156,000	(156,000)	112,500	328,500
Deferred (temp. differences)	(56,000)	(14,000)	(22,500)	31,500
Deferred (LCF)	—	(202,500)	—	—
Total tax expense (recovery)	100,000	(372,500)	90,000	360,000
Net income (loss)	$150,000	$(527,500)	$110,000	$440,000

Case B: Not probable LCF benefits	2011	2012	2013	2014
Income (loss) before tax	$250,000	$(900,000)	$200,000	$800,000
Income tax expense (recovery)				
Current	156,000	(156,000)	112,500	328,500
Deferred (temp. differences)	(56,000)	(14,000)	(22,500)	31,500
Deferred (LCF)	—	—	(112,500)	(90,000)
Total tax expense (recovery)	100,000	(170,000)	(22,500)	270,000
Net income (loss)	$150,000	$(730,000)	$222,500	$530,000

d. Effective tax rates

Case A: Probable LCF benefits	2011	2012	2013	2014
Income (loss) before tax	$250,000	$(900,000)	$200,000	$800,000
Case A: Probable LCF benefits				
Total tax expense (recovery)	$100,000	$(372,500)	$ 90,000	$360,000
Effective tax rate	40%	41.39%	45%	45%
Case B: Not probable LCF benefits				
Total tax expense (recovery)	$100,000	$ (170,000)	$ (22,500)	$270,000
Effective tax rate	40%	18.89%	–11.25%	33.75%
Statutory rate	40%	45%	45%	45%

In Case A, the effective tax rate equals the statutory rate in three of the four years. In 2012, the effective tax rate deviated from the statutory rate because there was a change in tax rate.

In Case B, the effective tax rate is equal to the statutory rate only in 2011, when the tax rate did not change from the prior year and when there are no losses. In 2012, the tax rate changed and there were losses that were not recognized as DIT assets. In 2013, the effective tax rate became negative because income before tax was positive, but there was an income tax recovery (a negative income tax expense) for using up tax losses that had not been previously recognized as assets. In 2014, the effective tax rate was lower than the statutory rate because a portion of the taxable income was offset by tax losses carried forward that had not been recognized as DIT assets.

P16-36. ***Suggested solution:***

($000s except percentages) Fiscal years ending December 31:	2011	2012	2013	2014	2015
Pre-tax accounting income (loss)	200	50	(360)	(200)	320
Temporary differences	(40)	(30)	(20)	50	(20)
Taxable income (loss) before carryforward or -back	160	20	(380)	(150)	300
Cumulative balance of deductible (taxable) temporary differences	(40)	(70)	(90)	(40)	(60)
Statutory tax rate (rate changes not known before the year to which they apply)	35%	30%	30%	30%	30%
End-of-year assessment of the degree of likelihood that the benefit of accumulated tax losses will be realized in the future (each year's likelihood is not known before that year)	N/A	N/A	70%	20%	90%
Tax losses carried back to prior years	—	—	**180**	**0**	**0**
Beginning balance of tax losses carried forward	—	—	**0**	**200**	**350**
Current-year tax losses carried forward	—	—	**200**	**150**	**0**
Use of tax losses carried forward from prior years	—	—	**0**	**0**	**(300)**
End-of-year balance of tax losses carried forward	—	—	**200**	**350**	**50**
End-of-year DIT asset for losses carried forward	—	—	**60**	**0**	**15**
End-of-year DIT liability for temporary differences	**(14)**	**(21)**	**(27)**	**(12)**	(18)
Journal entry [Please show credit amounts in (parentheses)]					
Income tax expense (recovery)	70	**13**	(116)	**45**	**(9)**
Income tax receivable (payable)	(56)	**(6)**	**62**	0	0
DIT asset for losses carried forward	—	—	**60**	**(60)**	**15**
DIT liability for temporary differences	(14)	**(7)**	**(6)**	**15**	**(6)**

Comments on each year:

2011: Ending balance of DIT liability = cumulative temporary differences × tax rate = $(40) × 35% = $14cr

2012: Ending balance of DIT liability = $(70) × 30% = $21cr
Change in DIT liability for temporary differences = $21cr – $14cr = $7cr
Increase in tax payable = $20 × 30% = $6 cr
Income tax expense is the balancing figure.

2013: Ending balance of DIT liability = $(90) × 30% = $27cr
Change in DIT liability for temporary differences = $27cr – $21cr = $6cr
Tax loss exceeds taxable income in 2011 and 2012, so income tax receivable = taxes paid in 2011 and 2012 = $56 + $6 = $62
Tax loss carryforward recognized as asset due to 70% likelihood of realization (>50%); $200 × 30% = $60.
Income tax expense is the balancing figure.

2014: Ending balance of DIT liability = $(40) × 30% = $12cr
Change in DIT liability for temporary differences = $12cr – $27cr = $15dr
DIT asset of $60 for tax losses carried forward written off due to 20% likelihood of realization.
Income tax expense is the balancing figure.

2015: Ending balance of DIT liability = $(60) × 30% = $18cr
Change in DIT liability for temporary differences = $18cr – $12cr = $6cr
Tax loss carryforward recognized as asset due to 90% likelihood of realization (>50%); $50 × 30% = $15.
Income tax expense is the balancing figure.

P16-37. ***Suggested solution:***

a. Permanent differences:

	Amount ($millions)	Rate
Tax-exempt income	(161)	(7.7)
Intangible assets not deductible for tax purposes	8	0.4

b. BMO had deferred tax assets ($1,196m) that exceeded deferred tax liabilities ($791m) at the end of 2008, for net deferred tax assets of $405m. The additional expense of $5 million for "change in tax rate for deferred income taxes" reflects a decrease in the value of this asset, implying that the tax rate has decreased (modestly) from 2008 to 2009.

c. The appearance of "Recovery of prior years' income taxes" in the reconciliation of the statutory and effective tax rates implies that BMO had not recognized some deferred tax assets for tax losses in prior years. Had such losses been fully recognized as assets, this line item would not appear.

P16-38. ***Suggested solution:***

a. Canadian Tire discloses the composition of the $162.9 million in income tax expense in Note 37, which is summarized as follows:

	Rate
Current tax expense	$162.9m
Deferred tax expense	6.4m
Total income tax expense	$169.3m

b. The effective tax rate was $162.9m / $629.9m = 25.9%. This is a bit lower than the statutory tax rate of 28.08% (16.5% federal + 11.58% provincial, as disclosed in Note 37).

c. Had the statutory tax rate been used to compute tax expense, the amount would have been $176.9m as disclosed in Note 37 or it can be calculated as $629.9m × 28.08% = $176.9m.

d. The statutory tax rate decreased by 2.41% from 30.49% to 28.08%. The decrease had no effect on income tax expense in 2011, as disclosed in Note 37.

37. Income Taxes

The following are the major components of the income tax expense:

(C$ in millions)	2011	2010
Current tax expense		
Current period	$ (185.7)	$ (178.3)
Adjustments in respect of prior years	16.4	45.3
	$ (169.3)	$ (133.0)
Deferred tax expense		
Deferred income tax expense relating to the origination and reversal of temporary differences	$ 6.4	$ (9.6)
Deferred income tax expense (benefit) resulting from change in tax rate	—	—
	$ 6.4	$ (9.6)
Income tax expense	$ (162.9)	$ (142.6)

e. The company had deferred income tax assets of $36.8m and deferred income tax liabilities of $66.1m, for a net liability of $29.3m. This information is displayed on the balance sheet as well as in Note 19.

P16-39. ***Suggested solution:***

a. Telus incurred income tax expense totalling $376 million (see income statement). Note 9 separates out current and deferred amounts as follows:

	Rate
Current tax expense	$171m
Deferred tax expense	205m
Total income tax expense	$376m

b. The effective tax rate was $376m / $1,591m = 23.6%%. This is a lower than the statutory tax rate of 27.2%, as disclosed in Note 37.

c. Had the statutory tax rate been used to compute tax expense, the amount would have been $433m as disclosed in Note 9 or it can be calculated as $1,591m × 27.2%% = $433m, which is $57m higher than the actual expense reported.
d. The most significant factor explaining the difference in effective and statutory tax rates is the change in tax rates anticipated in future years (i.e., there are lower tax rates in future years that have been enacted or substantially enacted by the end of 2011). This change explains $37m of the total difference of $57m.
e. The balance sheet reports deferred income tax liability of $1,600 million.
f. The source of the largest temporary difference was intangible assets with indefinite lives. The effect of this item on the deferred tax liability is $1,113 million. This temporary difference is due to the fact that we do not amortize intangible assets with indefinite lives, whereas tax laws allow deductions for such items. The additional tax deductions taken now creates a liability for tax payments in future years.
g. Temporary difference = deferred tax asset or liability / statutory tax rate = $1,113m / 27.2% = $4,092.

P16-40. ***Suggested solution:***

a. Bombardier incurred income tax expense totalling $203 million (see income statement). Note 10 separates out current and deferred amounts as follows:

	Rate
Current tax expense	$137m
Deferred tax expense	66m
Total income tax expense	$203m

b. The effective tax rate was $203m / $1,040m = 19.5%%. This is a lower than the statutory tax rate of 28.4%, as disclosed in Note 10.

10. INCOME TAXES (CONTINUED)

The reconciliation of income taxes, computed at the Canadian statutory rates, to income tax expense was as follows for the fiscal years ended:

	December 31, 2011[1]	January 31, 2011
EBT	**$1,040**	$ 997
Canadian statutory rate	**28.4%**	30.0%
Income tax expense at statutory rate	**295**	299
Increase (decrease) resulting from:		
Recognition of previously unrecognized tax losses or temporary differences	**(204)**	(146)
Non-recognition of tax benefits related to tax losses and temporary differences	**98**	53
Effect of substantively enacted income tax rate changes and tax status changes in certain entities	**11**	4
Permanent differences	**(3)**	7
Write down of deferred income tax assets	**–**	9
Other	**6**	(4)
Income tax expense	**$ 203**	$ 222
Effective tax rate	**19.5%**	22.3%

1 The fiscal year ended December 31, 2011 comprises 11 months of BA's results and 12 months of BT's results.

The applicable statutory tax rates are 28.4% for the fiscal year ended December 31, 2011 and 30.0% for the fiscal year ended January 31, 2011. The Corporation's applicable tax rate is the Canadian combined rate applicable in the jurisdictions in which the Corporation operates. The decrease is mainly due to the reduction of the Federal income tax rate applicable to the Corporation for the fiscal year ended December 31, 2011 from 17.9% to 16.5%.

c. Had the statutory tax rate been used to compute tax expense, the amount would have been $295m as disclosed in Note 10 or it can be calculated as $1,040m × 28.4% = $295m, which is $92m higher than the actual expense reported.

d. The most significant factor explaining the difference in effective and statutory tax rates is the recognition of "unrecognized tax losses or temporary differences." This item reduced tax expense by $204m.

e. The balance sheet reports deferred income tax assets at $1,506 million and a deferred income tax liability of $67 million.

f. The source of the largest temporary difference was operating tax losses. The effect of this item on the deferred tax liability is $1,502 million (prior to deducting any amount for a valuation allowance).

g. The valuation allowance was $2,141 million, as disclosed in Note 10.

DEFERRED INCOME TAXES

The significant components of the Corporation's deferred income tax asset and liability were as follows as at:

	December 31, 2011		January 31, 2011		February 1, 2010	
	Asset	**Liability**	Asset	Liability	Asset	Liability
Operating tax losses carried forward	**$ 1,502**	**$ –**	$ 1,261	$ –	$ 1,226	$ –
Retirement benefits	**894**	**–**	523	–	578	–
Advance and progress billings in excess of long-term contract inventories and advances on aerospace programs	**847**	**–**	412	–	400	–
Inventories	**499**	**(67)**	540	(53)	609	(65)
Provisions	**463**	**–**	461	–	370	–
Other financial assets and Other assets	**(353)**	**–**	(170)	–	(246)	–
PP&E	**(273)**	**–**	(108)	–	(77)	–
Other financial liabilities and Other liabilities	**148**	**–**	186	–	96	–
Intangible assets	**(110)**	**–**	(6)	–	48	–
Other	**30**	**–**	47	–	116	–
	3,647	**(67)**	3,146	(53)	3,120	(65)
Unrecognized deferred tax assets	**(2,141)**	**–**	(1,852)	–	(1,747)	–
	$ 1,506	**$(67)**	$ 1,294	$(53)	$ 1,373	$(65)

O. Mini-Cases

Case 1: The Political Economy of Income Tax Reporting. ***Suggested solution:***

The reporting of income taxes in financial reports is complex and can easily mislead those who are not keenly aware of the accounting standards and methods that apply to this area.

The first and most important thing to note is that income taxes on the financial statements do not directly correspond to the amount of taxes owing according to the Income Tax Act. Income taxes for financial reporting purposes are computed using the accrual accounting procedure, which tries to record income tax expense in the period in which the taxpayer records the associated revenues. In other words, financial reporting aims to record the tax expense in the period when the economic event occurs, while the amount of actual taxes depends on the tax laws. Due to the difference in objective, the tax expense can significantly deviate from the actual taxes payable according to legislation.

The deferred tax liabilities that you pointed out in Exhibit 2 are a result of this difference, accumulated over many years. For instance, of the $1.8 billion total, TD identified $898 million as relating to intangible assets. The most likely reason for this deferred tax liability is that tax laws allow companies to expense the costs of intangible assets more rapidly (or even immediately), whereas these same intangible assets would be amortized more slowly for financial reporting purposes. The $898 million does not represent any taxes that TD has not paid but should have. Rather, it is simply a difference in reporting objectives. However, you could question whether the tax laws are too generous in terms of the amount of deductions allowed. I

am unable to provide any advice in this regard as this is a question best left to you and your fellow members of parliament.

The second point to note is that TD's taxes are low because of the nature of its operations. As a financial institution, the company has many investments in other companies. Tax laws permit dividends received from other taxable Canadian corporations to be tax exempt because such dividend income comes from after-tax dollars of the paying corporation. This is why Exhibit 1 shows TD's tax rate being reduced by 10.5% for dividends received. I would advise you not to pursue this aspect because it would be illogical to levy a tax on inter-corporate dividends.

TD is also a large company that has operations in jurisdictions outside of Canada. To the extent that foreign tax rates are lower than in Canada, TD would record a lower tax expense in comparison to income that is 100% earned and taxable within Canada. One issue that may be of concern to you is whether TD and other international companies have used sophisticated tax planning arrangements to reduce taxes not only for its foreign operations but also for its Canadian operations. There is insufficient information for me to draw any meaningful conclusions on this issue. If you wish to pursue this line of inquiry, you would need to obtain much more detailed information that is not publicly available.

Case 2: Whitney Equity Partners. ***Suggested solution:***

To: Jane and Kevin
Subject: Income tax issues for Nieman Inc. and Marcus Company

The information the two of you provided relating to Nieman and Marcus raises interesting issues that confound many financial statement readers who are not intimately familiar with the accounting for income taxes. Under the accrual method of accounting for income taxes, which is implied by the note disclosures provided, there are several causes for the effective tax rate (being the income tax expense divided by pre-tax income) to be higher or lower than the statutory rate, and these causes are largely independent of management's tax planning abilities.

The first of these relate to what are called "permanent differences" for income or expenses that are included in the financial statements but never appear in taxable income. As noted in Nieman's note, the company's income tax expense was lowered by $655,000 for dividend income that is non-taxable. Dividend income received by corporations from other taxable Canadian corporations is generally tax exempt to prevent double and triple taxation of the same income flowing from one corporation to another. The $655,000 represents approximately $2,113,000 of non-taxable dividend income ($655,000 / 0.31). This income is part of Nieman's pre-tax income for financial reporting purposes, but not taxable. Excluding this dividend income, we can see that Nieman's effective tax rate is the same as the statutory tax rate.

	Pre-tax income ($000s)*	Statutory tax rate	Income tax expense	Effective tax rate†
Pre-tax income and tax at statutory rate	$14,548	31.0%	$4,510	
Less: Tax-exempt dividend income	(2,113)	31.0%	(655)	
Taxable income	$12,435		$3,855	31.0%

*Computed as income tax expense ÷ statutory tax rate
†Computed as income tax expense ÷ taxable income

The second reason for the effective tax rate to deviate from the statutory tax rate is a change in the tax rates themselves. Due to differences in objectives, some income and expenses are reflected earlier or later in financial reports relative to tax returns; these are called "temporary differences" because these differences reverse over time. One consequence of temporary differences is the recognition of amounts in the balance sheet for deferred tax assets and liabilities. If there is a deferred tax liability, an increase in the statutory tax rate means that the taxpayer is liable for a larger amount for a given amount of income. As the value of that liability increases (a credit), an income tax expense is recorded (a debit). The opposite applies for deferred tax assets.

The information for Marcus Companies indicates that there was an increase in tax rates which contributed to an increase in the total tax expense by $610,000, so we can infer that Marcus had substantial deferred tax liabilities (not deferred tax assets). We also know that the income tax expense of $2,720,000 is 40% of Marcus's pre-tax income, which would be about $6,800,000 ($2,720,000 ÷ 0.40). The amount of income tax expense excluding the effect of the tax rate change is $2,110,000, which is approximately 31% of the pre-tax income ($2,110,000 ÷ $6,800,000).

To summarize, the information available for Nieman and Marcus does not provide any indication that either company's management is particularly effective or ineffective in their tax planning abilities. Any such evaluation would need to consider information other than what is contained in these disclosures.

Case 3: Oddities in the Accounting for Income Tax. ***Suggested solution:***

a. It is possible for a company to report a loss before tax and income tax expense under 2 scenarios:

i. The company has large amount of expenses that are never deductible for tax purposes (i.e., large permanent differences). The loss in the accounting system is $3M but if $8M of expenses cannot be deducted for tax purposes, then taxable income is $5M and income tax expense is $2M as follows:

Pre-tax loss		(3,000,000)
Add back: permanent differences		8,000,000
Taxable income		5,000,000
Income tax	(40%)	2,000,000

The company will record the following journal entry:

Dr. Current income tax expense	2,000,000	
Cr. Income Tax payable		2,000,000
Therefore:		
Loss from continuing operations	(3,000,000)	
Income tax expense (current and future)	2,000,000	
Net Loss		(5,000,000)

ii. In the past, the company had created a deferred tax asset due to a loss carry forward. This year it has become improbable that the company will be able to realize the deferred tax asset due to loss carry forward in the amount of $2M. It is also improbable that the company will be able to realize tax savings in the future due to this year's loss. Thus, no future tax asset is created due to this year's loss, and the existing future tax asset is written off with the following journal entry:

Dr. Future income tax expense	2,000,000	
Cr. Future tax asset loss carry forward		2,000,000

b. The issue is that the gain on the appreciation of the investment is recorded neither in accounting income nor as income for tax purposes. The accounting system will mark the investment to fair value, but will record the appreciation to other comprehensive income (OCI).

Dr. Investment in Sunset	60,000	
Cr. Unrealized gain on investment (OCI)		60,000

While the tax authorities allow the company to defer the tax on the appreciation until realization (sale of the securities), the company knows today that it will have to pay tax on the appreciation in the value of the asset in the future and the value of the asset is already presented on the balance sheet. Therefore, it needs to create a future tax liability. Yet, because the appreciation was not recorded through the income statement, it did not affect the income tax expense. As a result, the creation of the deferred tax liability will be recorded against an OCI account and not as an income tax expense. The entry will be:

Dr. Future tax expense (OCI)	21,000	
Cr. Future tax liability		21,000

c. One simple possibility is that the company has no past taxable income to offset the current loss. This can be the case if this is the first year of operation. It is also typical for young companies (start-ups) to report losses in the first years of their operations.

A second possibility is that in the years against which the loss can be carried back and offset, the company was subject to a low statutory tax rate (i.e., the tax rate has gone up in recent years). Thus, if the company has no urgent need for cash, and believes that it will have taxable income in the future to use the losses carried forward, then the company could conclude that it will benefit more from carrying the loss forward as it will be offset against income subject to the higher tax rate, rather than from carrying the loss backward.

A third possibility is somewhat similar to the second possibility. The company expects the tax rate to *increase in the coming years*, has no urgent need for cash, and believes that it will have taxable income in the future to use the losses carried forward. Then, the company might conclude that it will benefit more from carrying the loss forward as it will be used to offset income subject to the higher tax rate, rather than from carrying the loss backward.

